

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A fuel cell assembly, comprising:
a housing defining an interior and an exterior;
a fuel cell located within the housing;
at least one electrical conductor that extends from the interior of the housing to the exterior of the housing; and
at least one liquid metal electrical interconnect that electrically connects the fuel cell to the at least one electrical conductor.
2. (Canceled)
3. (Original) A fuel cell assembly as claimed in claim 1, wherein
the fuel cell comprises an anode and a cathode;
the at least one electrical conductor comprises a positive electrical conductor and a negative electrical conductor; and
the at least one liquid metal electrical interconnect comprises a first liquid metal electrical interconnect that electrically connects the anode to the negative electrical conductor and a second liquid metal electrical interconnect that electrically connects the cathode to the positive electrical conductor.
4. (Original) A fuel cell assembly as claimed in claim 1, wherein the fuel cell comprises a solid oxide fuel cell.

5. (Original) A fuel cell assembly as claimed in claim 1, wherein the fuel cell comprises a substantially tubular fuel cell.

6. (Original) A fuel cell assembly as claimed in claim 1, wherein the liquid metal electrical interconnect comprises a material having a boiling point of at least about 1500°C.

7. (Original) A fuel cell assembly as claimed in claim 1, wherein
the fuel cell has an operating temperature; and
the liquid metal electrical interconnect comprises a material having a boiling point that is greater than the operating temperature of the fuel cell.

8. (Original) A fuel cell assembly as claimed in claim 1, wherein the liquid metal electrical interconnect comprises a material having a melting point of not more than about 100°C.

9. (Original) A fuel cell assembly as claimed in claim 1, wherein the liquid metal electrical interconnect comprises an indium-gallium alloy.

10. (Original) A fuel cell assembly as claimed in claim 9, wherein indium-gallium alloy comprises about 24.5% indium and about 75.5% gallium.

11-21. (Canceled)

22. (Currently Amended) A fuel cell assembly, comprising:
a housing assembly including at least one reactant chamber and a plurality of housing components, one of which is a reactant tube that is operably connected to the reactant chamber; ~~and at least one reactant chamber;~~
a fuel cell located within the housing assembly; and
at least one liquid metal electrical interconnect/seal that electrically connects the fuel cell to ~~one of the housing components~~ the reactant tube and forms a seal between the at least one reactant chamber and ~~one of the housing components~~ the reactant tube.

23-24. (Canceled)

25. (Currently Amended) A fuel cell assembly as claimed in ~~claim 24~~ claim 22, wherein the fuel cell comprises a substantially tubular fuel cell.

26. (Original) A fuel cell assembly as claimed in claim 22, wherein the fuel cell comprises a solid oxide fuel cell.

27. (Original) A fuel cell assembly as claimed in claim 22, wherein the liquid metal electrical interconnect/seal comprises a material having a boiling point of at least about 1500°C.

28. (Original) A fuel cell assembly as claimed in claim 22, wherein
the fuel cell has an operating temperature; and
the liquid metal electrical interconnect/seal comprises a material having a boiling point that is greater than the operating temperature of the fuel cell.

29. (Original) A fuel cell assembly as claimed in claim 22, wherein the liquid metal electrical interconnect/seal comprises a material having a melting point of not more than about 100°C.

30. (Original) A fuel cell assembly as claimed in claim 22, wherein the liquid metal electrical interconnect/seal comprises an indium-gallium alloy.

31. (Original) A fuel cell assembly as claimed in claim 30, wherein indium-gallium alloy comprises about 24.5% indium and about 75.5% gallium.

32. (Currently Amended) A fuel cell system, comprising:
a reactant supply; and
a fuel cell assembly including
a housing defining an interior and an exterior;
a fuel cell located within the housing and operably connected to the reactant supply;
at least one electrical conductor that extends from the interior of the housing to the exterior of the housing, and
at least one liquid metal electrical interconnect that electrically connects the fuel cell to the at least one electrical conductor.

33. (Original) A fuel cell system as claimed in claim 32, wherein the reactant supply comprises a fuel supply.

34. (Original) A fuel cell system as claimed in claim 32, wherein
the fuel cell comprises an anode and a cathode;
the at least one electrical conductor comprises a positive electrical conductor and a negative electrical conductor; and
the at least one liquid metal electrical interconnect comprises a first liquid metal electrical interconnect that electrically connects the anode to the negative electrical conductor and a second liquid metal electrical interconnect that electrically connects the cathode to the positive electrical conductor.

35. (Original) A fuel cell system as claimed in claim 32, wherein the fuel cell comprises a solid oxide fuel cell.

36. (Original) A fuel cell system as claimed in claim 32, wherein
the fuel cell has an operating temperature; and
the liquid metal electrical interconnect comprises a material having a boiling point that is greater than the operating temperature of the fuel cell.

37. (Original) A fuel cell system as claimed in claim 32, wherein the liquid metal electrical interconnect comprises a material having a melting point of not more than about 100°C.

38-43. (Canceled)

44. (Currently Amended) A fuel cell system, comprising:
a reactant supply; and
a fuel cell assembly including
a housing assembly including at least one reactant chamber and a plurality of housing components ~~and at least one reactant chamber~~, one of which is a reactant tube that operably connected ~~connects the reactant chamber~~ to the reactant supply;
a fuel cell located within the housing assembly, and
at least one liquid metal electrical interconnect/seal that electrically connects the fuel cell to ~~one of the housing components~~ the reactant tube and forms a seal between the at least one reactant chamber and ~~one of the housing components~~ the reactant tube.

45-46. (Canceled)

47. (Original) A fuel cell system as claimed in claim 44, wherein the fuel cell comprises a solid oxide fuel cell.

48. (Original) A fuel cell system as claimed in claim 44, wherein
the fuel cell has an operating temperature; and
the liquid metal electrical interconnect/seal comprises a material having a boiling point that is greater than the operating temperature of the fuel cell.

49. (Original) A fuel cell system as claimed in claim 48, wherein the liquid metal electrical interconnect/seal comprises a material having a melting point of not more than about 100°C.

50. (Currently Amended) A method of making a fuel cell assembly, comprising the step of:

forming a liquid metal electrical interconnect between a fuel cell that is located within a housing and at least one electrical conductor that extends outside the housing.

51. (Original) A method of making a fuel cell assembly as claimed in claim 50, wherein the step of forming a liquid metal electrical interconnect comprises forming a liquid metal electrical interconnect between a fuel cell and at least one electrical conductor with a material having a boiling point of at least about 1500°C.

52. (Original) A method of making a fuel cell assembly as claimed in claim 50, wherein the fuel cell has an operating temperature and the step of forming a liquid metal electrical interconnect comprises forming a liquid metal electrical interconnect between a fuel cell and at least one electrical conductor with a material having a boiling point that is greater than the operating temperature of the fuel cell.

53. (Original) A method of making a fuel cell assembly as claimed in claim 50, wherein the step of forming a liquid metal electrical interconnect comprises forming a liquid metal electrical interconnect between a fuel cell and at least one electrical conductor with a material having a melting point of not more than about 100°C.

54-58. (Canceled)

59. (Currently Amended) A method of making a fuel cell assembly, comprising the step of:

forming a liquid metal electrical interconnect/seal that electrically connects a fuel cell to a ~~housing component~~ reactant tube and forms a seal between at least one reactant chamber and a ~~housing component~~ the reactant tube.

60. (Canceled)

61. (Currently Amended) A method of making a fuel cell assembly as claimed in claim 59, wherein the step of forming a liquid metal electrical interconnect/seal comprises forming a liquid metal electrical interconnect/seal that electrically connects a fuel cell to a ~~housing component~~ reactant tube and forms a seal between at least one reactant chamber and a ~~housing component~~ the reactant tube with a material having a boiling point of at least about 1500°C.

62. (Currently Amended) A method of making a fuel cell assembly as claimed in claim 59, wherein the fuel cell has an operating temperature and the step of forming a liquid metal electrical interconnect/seal comprises forming a liquid metal electrical interconnect/seal that electrically connects a fuel cell to a ~~housing component~~ reactant tube and forms a seal between at least one reactant chamber and a ~~housing component~~ the reactant tube with a material having a boiling point that is greater than the operating temperature of the fuel cell.

63. (Currently Amended) A method of making a fuel cell assembly as claimed in claim 59, wherein the step of forming a liquid metal electrical interconnect/seal comprises forming a liquid metal electrical interconnect/seal that electrically connects a fuel cell to a ~~housing component~~ reactant tube and forms a seal between at least one reactant chamber and a ~~housing component~~ the reactant tube with a material having a melting point of not more than about 100°C.

64. (Canceled)

65. (Currently Amended) A fuel cell assembly, comprising:
a housing assembly including at least one reactant chamber and a plurality of housing components, one of which is a reactant tube that is operably connected to the reactant chamber; and ~~at least one reactant chamber;~~
a fuel cell located within the housing assembly; and
means for electrically connecting the fuel cell to ~~one of the housing components~~ the reactant tube and forming a seal between the at least one reactant chamber and ~~one of the housing components~~ the reactant tube that will not be substantially stressed in response to the at least one reactant chamber and the ~~one of the housing components~~ reactant tube changing dimensions at different rates.